Scan Do® ULTRA

RS-232 Remote Control Software and Protocol

USER'S MANUAL

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P/N 101677 Rev. D

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Included With This Product You Should Have

2 - 3.5" Floppy Diskettes with SDUltra Win 3.1x program
2 - 3.5" Floppy Diskettes with SDUltra Win 95/NT program
1 - RS-232 Remote Control User's Manual

INTRODUCTION

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Thank you for using the RS-232 Remote Control interface for Scan Do® Ultra and Scan Do Ultra/D. We are sure you will find it to be a reliable and useful function with a wide array of uses.

Like all the products from Communications Specialties, the RS-232 Remote Control interface for Scan Do Ultra comes with our continuing commitment to provide support. In order to assist us in this process, please be sure to mail in your product registration card. This will make it easier for us to notify you with any new product announcements or other information concerning our product line. Should you need to contact us for support, our office is open Monday through Friday, from 8:30 AM to 5:00 PM Eastern Time. We also offer a comprehensive web site for your added convenience.

Thank you for choosing Scan Do Ultra. As always, we welcome your comments and suggestions.

Scan Do is a registered trademark of Communications Specialties, Inc.

SDUltra -
THE WINDOWS CONTROL PROGRAM

This section describes the installation of the RS-232 Remote Control software called SDUltra, which is provided on the enclosed disks in two versions:

A 16-bit version for Windows 3.1x
A 32-bit version for Windows 95 and NT only

Installing SDUltra With Windows 3.1x

1. Place the disk labelled **SDUltra Win 3.1x Disk 1** in the A: drive of your PC.

2. From Program Manager in Windows 3.1x, select:
File - Run

3. In the box for Command Line enter:
a:\setup

4. Click **OK**.

5. Follow the instructions on the computer screen to complete the installation.

Installing SDUltra With Windows 95 or NT

1. Place the disk labelled **SDUltra Win 95/NT Disk 1** in the A: drive of your PC.

2. Click on **Start** icon.

3. Click on the **Run** icon.

3. In the box for Open enter:
a:\setup

4. Click **OK**.

5. Follow the instructions on the computer screen to complete the installation.

Operating SDUltra is very easy. Just select the function you want from the Main menu or Main screen. An extensive Help menu system is also available.

CONNECTING TO THE RS-232 REMOTE CONTROL PORT

The Remote Control RS-232 port on the rear of the ***Scan Do Ultra*** is a standard RS-232, 9-pin port. A DB-9 male to DB-9 female cable was provided with ***Scan Do Ultra*** to connect a standard PC port to Ultra. The configuration of the port is designed so that a standard straight-through wiring DB-9 male to DB-9 female cable can be used to connect the port to a standard 9-pin serial port on a PC compatible.

The pin-out for the Remote Control port is as follows:

DB-9 Remote Control Port	Function
1	DCD
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	No connection

The baud rate and handshaking is determined by the settings for baud rate and handshaking established from the front panel of Scan Do Ultra. If nothing has been selected, the default is:

4800 baud, No parity, 8 bits, 2 Stop bits, No handshaking

SDUltra has an extensive on-line Help menu system to guide you in the operation of the software.

The first time you launch SDUltra you must tell it what COM port on your PC the Scan Do Ultra is connected. This is done by clicking on the item **Options** on the Main menu and selecting a COM port.

Please note that a Scan Do Ultra must be connected to the PC and powered On for the SDUltra software to work.

THE RS-232 REMOTE CONTROL PROTOCOL

Upon reset or power up, Scan Do Ultra will send an initialization string to the host. It is then ready to accept any commands below. These commands must be in UPPER CASE ONLY. These commands will do the same thing as if the user had pressed the appropriate buttons on the front panel of Ultra. The front panel display will not be updated to reflect the command execution until the user re-enters the corresponding submenu for the command after its execution. If the string sent to Ultra is not found to be a valid command, a syntax error string is sent and the command is flushed. If accepted, the command string will be echoed back to the host on a new line and in parenthesis, then followed by the input prompt > on the next line. The host should use CR to CRLF translation on the input in to the host but strip LFs on the output to Ultra.

The DOWNLOAD command is used to prepare for downloading code to Scan Do Ultra for test patterns. There is no operational exit from the download mode except for resetting. This may be manually accomplished by sending the string

:0000000000 (ten zero's)

which would be recognized as an end of file marker.

INITIALIZATION STRING:

The Initialization String sent from Ultra is:

FF
Scan Do Ultra Remote Control: Ready.
BEL
CR
>

ERROR MESSAGES WHEN NOT IN DOWNLOAD MODE:

Error 1: Bad Syntax, or ignored in standby.
Error 2: Bad Syntax, or ignored in freeze.
Error 3: Bad syntax.

STANDARD PROMPT FOR INPUT STRING:

CR
>

LEVEL 1 COMMANDS RECOGNIZED EVEN IN STANDBY MODE:

STANDBY=OFF
STANDBY=ON
STANDBY
DOWNLOAD
VERSION BASE
VERSION OPTION
VERSION TEST-PAT

LEVEL 2 COMMANDS RECOGNIZED EVEN IN FREEZE MODE:

FREEZE=ON
FREEZE=OFF
FREEZE
STATUS RESET ALL
VF
HF
LINES

LEVEL 3 COMMANDS RECOGNIZED IF NOT IN FREEZE MODE:

SOURCE=15-PIN
SOURCE=BNC
SOURCE

GENLOCK=ON
GENLOCK=OFF
GENLOCK

PHASING H-
PHASING H+
PHASING SC-
PHASING SC+

LEVEL 3 COMMANDS RECOGNIZED IF NOT IN FREEZE MODE (Continued):

FORMAT
FORMAT=NTSC
FORMAT=PAL
FORMAT=VGA640
FORMAT=MAC640
FORMAT=VGA800

THRESHOLD
THRESHOLD=LOW
THRESHOLD=MEDIUM
THRESHOLD=HIGH
LEVEL -
LEVEL +
LEVEL *

COMPONENT
COMPONENT=BETA
COMPONENT=M-II
COMPONENT=RGBS
COMPONENT=RGSB

TEST-PAT
TEST-PAT=OFF
TEST-PAT=COLBAR
TEST-PAT=GRYBAR
TEST-PAT=HATCH
TEST-PAT=CUSTOM

NTSC BRIGHT -
NTSC BRIGHT *
NTSC BRIGHT +
NTSC CONTRAST -
NTSC CONTRAST *
NTSC CONTRAST +
NTSC COLOR -
NTSC COLOR *
NTSC COLOR +
NTSC HUE -
NTSC HUE *
NTSC HUE +

LEVEL 3 COMMANDS RECOGNIZED IF NOT IN FREEZE MODE (Continued):

PAL BRIGHT -
PAL BRIGHT *
PAL BRIGHT +
PAL CONTRAST -
PAL CONTRAST *
PAL CONTRAST +
PAL COLOR -
PAL COLOR *
PAL COLOR +

RGB BRIGHT -
RGB BRIGHT *
RGB BRIGHT +
RGB CONTRAST -
RGB CONTRAST *
RGB CONTRAST +
RGB BALANCE R-
RGB BALANCE R+
RGB BALANCE G-
RGB BALANCE G+
RGB BALANCE B-
RGB BALANCE B+

YUV BRIGHT -
YUV BRIGHT *
YUV BRIGHT +
YUV CONTRAST -
YUV CONTRAST *
YUV CONTRAST +
YUV COLOR -
YUV COLOR *
YUV COLOR +

LEVEL 3 COMMANDS RECOGNIZED IF NOT IN FREEZE MODE (Continued):

SAVE=1
SAVE=2
SAVE=3
SAVE=4
SAVE=5
RECALL=1
RECALL=2
RECALL=3
RECALL=4
RECALL=5

ZOOM=100%
ZOOM -
ZOOM +
SIZE H-
SIZE H+
SIZE V-
SIZE V+
MOVE H-
MOVE H+
MOVE V-
MOVE V+
AUTOSET

Note: The AUTOSET command is not available from the front panel of Scan Do Ultra. This command initiates an acquisition sequence which determines the input computer video's sync timing and sizes the image on the output screen in a 1:1 zoom ratio.